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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

SEYE, ABDOU K

ART UNIT PAPER NUMBER

2194

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/650,176

Applicant(s)

FULLER, JEFFREY C.

Examiner

Abdou Karim Seye

Art Unit

2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/22/2004.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____


WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

DETAILED ACTION

1. This is the initial office action based on the application filed on August 28, 2003.

Claims 1-26 are currently pending and have been considered below.

Claim Objections

2. Claim 18 is objected to because of the following informalities:

Claim 18 contains this expression " A method as in claim 1 " and should be dependent on claim 10. The examiner considers the following character " 1 " within the above expression as a typographical error from the applicant.

A correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-6, 9-15, 18-23 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by **Kush (US 6874144)**.

Claims 1, 10 and 19 :Kush discloses a method, system and computer-readable medium having computer-executable instructions comprising:

a.Receiving an I/O request from an application thread (Abstract; fig.1, col. 4, lines 63-67);

b. Performing an I/O operation in response to the I/O request (Abstract; fig. 1, col. 5 lines 1-10); and

c. Determining whether to boost priority of the application thread (Abstract; fig. 9/272,274,282, col. 10, lines 36-67).

Claims 2, 11, and 20 :Kush discloses a method, system and computer-readable medium having computer-executable instructions as in claims 1, 10 and 19 above and further discloses steps of:

a. Determining not to boost the priority of the application thread (fig. 9/272,276,280,284, col. 10, lines 36-67); and

b. Determining whether to boost the priority of the application thread (fig. 9/272,274,282, col. 10, lines 36-67).

Claims 3, 12 and 21:Kush discloses a method, system and computer-readable medium having computer-executable instructions as in claims 1, 10 and 19 above and further discloses a memory pool, and the step of performing the I/O operation includes copying data into the I/O memory (fig. 2 col. 5, lines 50-55).

Claims 4, 13 and 22 :Kush discloses a method, system and computer-readable medium having computer-executable instructions as in claims 1, 10 and 19 above and further discloses the step of boosting the priority of the application (fig. 9, col. 11, lines 5-15).

Claims 5 and 14 :Kush discloses a method, system and computer-readable medium having computer-executable instructions as in claims 4, 13 and 22 above and

further discloses that the step of boosting boosts the priority of the application thread by a pre-selected level; high and low (fig. 2 col. 5, lines 60-67).

Claims 6, 15 :Kush discloses a method, system and computer-readable medium having computer-executable instructions as in claims 5, 14 above and further discloses that the pre-selected level is fixed (fig. 2 col. 5, lines 60-67).

Claim 23:Kush discloses a method, system and computer-readable medium having computer-executable instructions as in claims 4, 13 and 22 above and further discloses that the pre-selected level is fixed (fig. 2 col. 5, lines 60-67).

Claims 9, 18 and 26 :Kush discloses a method, system and computer-readable medium having computer-executable instructions as in claims 1, 10 and 19 above and further discloses that the priority boost is based on a period of time since a last time the priority of the application thread was boosted (fig. 5, col. 8, lines 5-25)

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103 (a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7 and 8 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Kush. (US 6874144) in view of Accapadi et al (20050022186).

Claims 7, 8, 16, 17, 24 and 25: Kush discloses a method, system and computer-readable medium having computer-executable instructions as in claim 1, 10 and 19 above that determines whether to boost a priority of an application thread based on status of I/O operations, However, Kush does not explicitly disclose whether the need for more input output operations by the application thread or the number of input/output operations completed successfully determine to boost the priority of the application thread. Accapadi discloses a system, method and program that increase the priority of an application thread at the step where the user thread enter a critical section of code or the user thread has occupied a critical resource which forces more I/O operations and more data transactions that must complete successfully before execution of other threads (fig. 1, paragraph 25) such as updating data in user level data structure important to the overall process or a database thread that is currently updating a page of data in a buffer pool. It would be obvious to one having ordinary skill in the art at the time the invention was made to increase the priority of an application thread when certain number of transactions that produces frequently used data object are still running and must complete successfully before execution of other dependent threads. Therefore, one would have been motivated to provide a system, method and medium that increase priority of an application thread in order to maintain data structure integrity and to improve the overall system throughput.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

Farrell et al (5630128) discloses a controlled scheduling of program thread in a multitasking operating system.


Waldrom, III et al (6021425) discloses a system and method for optimizing dispatch latency of tasks in a data processing system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Exr. Abdou Seye whose telephone number is (571) 270-1062. The examiner can normally be reached Monday through Friday from 7:30 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, contact the examiner's supervisor, William Thomson at (571) 272-3718. The fax phone number for formal or official faxes to Technology Center 3600 is (571) 273-8300. Draft or informal faxes, which will not be entered in the application, may be submitted directly to the examiner at (571) 273-6722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (571) 272-3600.

AKS
Sept 25, 2006


WILLIAM THOMSON
William Thomson
Supervisory Patent Examiner

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